



Infectious Disease Epidemiology Report

Animal Rabies, Maine -- 2006



Background

The Infectious Disease Epidemiology program and the Maine Health and Environmental Testing laboratory of the Maine Center for Disease Control and Prevention monitor the incidence of animal rabies through mandatory reporting of suspected animal rabies by veterinarians, animal control officers, health care providers and other health professionals. This report summarizes surveillance data on animal rabies from 2006.

Methods

Rabies is a viral disease of the central nervous system that is almost always fatal. Maine's Health and Environmental Testing Laboratory performs rabies testing on animals with human or domestic animal exposure, or animals without exposure at the submitters' expense. Laboratory-confirmed animal rabies cases are investigated to learn information on the animal's vaccination history and current health status, circumstances of any exposures, and actions recommended to prevent the spread of rabies.

Rabies-positive Animals

A total of 822 animals were submitted for rabies testing during 2006. Of these, 127 (15.5%) animals were positive for the rabies virus (Table). Although bats, raccoons, and skunks accounted for the majority of rabid animals identified in 2006, six domestic cats were also found to be rabid. The incidence of animal rabies increased in 2006 compared to previous years (Figure 1).

Figure 1: Animal rabies by year -- Maine, 2002-06

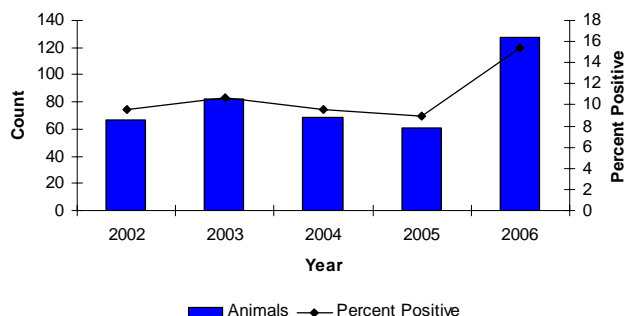


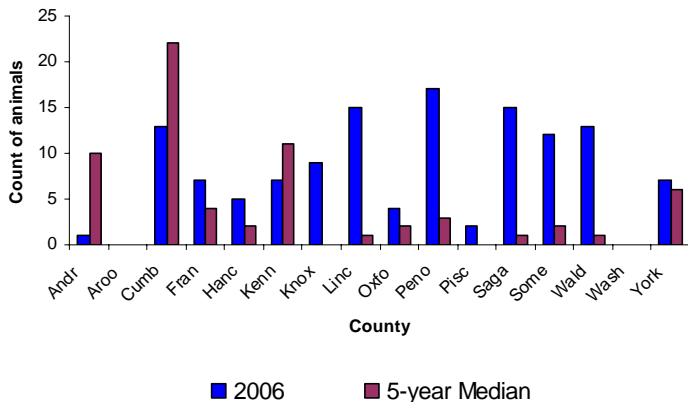
Table: Animals submitted for rabies testing by positive result and species -- Maine, 2006

| Species | Received | Positive | |
|--------------|------------|------------|-------------|
| | No. | No. | % |
| Bat | 258 | 15 | 5.8 |
| Beaver | 2 | 0 | 0 |
| Cat | 187 | 6 | 3.2 |
| Cattle | 7 | 1 | 14.3 |
| Coyote | 2 | 0 | 0 |
| Deer | 1 | 0 | 0 |
| Dog | 78 | 0 | 0 |
| Donkey | 1 | 0 | 0 |
| Ermine | 4 | 0 | 0 |
| Ferret | 1 | 0 | 0 |
| Fox | 18 | 2 | 11.1 |
| Goat | 8 | 0 | 0 |
| Hamster | 1 | 0 | 0 |
| Horse | 7 | 0 | 0 |
| Llama | 1 | 0 | 0 |
| Mink | 1 | 0 | 0 |
| Mole | 1 | 0 | 0 |
| Mouse | 1 | 0 | 0 |
| Muskrat | 10 | 0 | 0 |
| Opossum | 2 | 0 | 0 |
| Otter | 1 | 0 | 0 |
| Pig | 2 | 0 | 0 |
| Porcupine | 1 | 0 | 0 |
| Rabbit | 5 | 0 | 0 |
| Raccoon | 116 | 59 | 50.9 |
| Rat | 1 | 0 | 0 |
| Sheep | 2 | 0 | 0 |
| Skunk | 73 | 43 | 59.0 |
| Squirrel | 6 | 0 | 0 |
| Weasel | 1 | 0 | 0 |
| Wolf/Hybrid | 4 | 1 | 25.0 |
| Woodchuck | 19 | 0 | 0 |
| Total | 822 | 127 | 15.5 |

Rabies-positive animals were identified in 83 towns in 14 counties in 2006 (Figure 2). Distribution of positive animals statewide may not be representative of rabies, because results are based on only those animals submitted for testing generally due to contact with a human or domestic animal. A marked increase in animal rabies was observed in six Maine counties in 2006: Knox, Lincoln, Penobscot, Sagadahoc, Somerset, and Waldo.

Animal Rabies – Maine, 2006

Figure 2: Animal Rabies by County -- Maine, 2006



Rabies Prevention

In the event of a rabid animal or an exposure to an animal that is unavailable for testing or quarantine, Maine CDC works collaboratively with other state and local agencies to recommend rabies control measures. Exposures of concern include:

- Bite (e.g., penetration of skin by teeth),
- Non-bite (e.g., saliva contamination to mucous membranes),
- Direct contact with a bat, and
- Being in the same room as a bat and unaware if direct contact may have occurred

Intended to prevent the spread of rabies, the most common control measures recommended include human post-exposure prophylaxis (PEP) and domestic animal (e.g., dog, cat or ferret) quarantine.

In 2006, a total of 144 persons were recommended by Maine CDC to receive PEP as a result of an exposure to a rabid animal or an animal unavailable for testing and presumed to be rabid. Of these, 38% were due to an exposure to a laboratory-confirmed rabid animal.

One hundred seventy-eight domestic animals were quarantined in 2006 due to an exposure with a wild animal. Domestic animals that were up-to-date on their rabies vaccine (70%) received a vaccine booster and were quarantined for 45-days. Those that were not up-to-date or never vaccinated (30%) were either euthanized or quarantined for 6-months and provided a vaccine booster.

Discussion

Animal rabies is found regularly among wild animals and occasionally among unvaccinated domestic animals in Maine. Recognition, prompt assessment, and management of potential rabies exposures will prevent human and domestic animal rabies in Maine.

The majority of human PEP in 2006 may have been averted had the animal suspected of rabies been captured and submitted for rabies testing. Increasing public knowledge about the risks of rabies associated with wild animals, including bats, and unknown domestic animals is important to prevent future exposures.

Suspect animal and human rabies is reportable immediately by telephone to our 24-hour disease reporting line 1-800-821-5821. Rabies PEP will be added as a reported condition when the notifiable disease rules change; until then, we request that public health partners report rabies PEP by calling the disease reporting line, or faxing reports to 287-8186. Epidemiologists are available to assess animal exposures, facilitate the testing of animals, and provide guidance on administering PEP.

For more information on animal rabies, see the Maine CDC rabies surveillance website (www.maine.gov/dhhs/boh/ddc/rabies_surveillance.htm) and federal CDC rabies website (www.cdc.gov/ncidod/diseases/submenu/sub_rabies.htm).